

WE CLAIM:

1. A filter cartridge end-of-life mechanism for a gravity-fed water treatment device, comprising:

a float which rises when the water treatment device is filled, and falls after the water has been treated; and

means for counting the number of times the water treatment device has been filled, including an escapement mechanism wherein said float is advanced along an escapement path each time said float rises and falls.

2. A filter cartridge end-of-life mechanism according to claim 1, wherein said float rotates about a center along a generally circular escapement path.

3. A filter cartridge end-of-life mechanism according to claim 1, wherein said escapement path includes upper and lower generally sawtoothed paths which are offset from one another, such that, when said float rises it is raised from a first tooth of said lower escapement path and travels along a first tooth of said upper escapement path, and when said float falls it engages a second tooth of said lower escapement path, thereby advancing said float.

4. A filter cartridge end-of-life mechanism according to claim 1, wherein said float includes at least one protrusion extending therefrom to engage said escapement path.

5. A filter cartridge end-of-life mechanism according to claim 1, further including means for providing a visual indication of when the filter cartridge has reached the end of its useful life.

6. A filter cartridge end-of-life mechanism according to claim 1, further including means for providing a continuous visual indication of the amount of useful life remaining in the filter cartridge.

7. A filter cartridge end-of-life mechanism according to claim 6, wherein said continuous visual indicating means comprise an indicating member advanced by said float as said float is advanced along said escapement path.

8. A filter cartridge end-of-life mechanism according to claim 7, wherein said indicating member is a gear which engages corresponding teeth on said float, such that, as said float rotates along said escapement path, said float advances said indicating gear in a generally circular path, a portion of said indicating gear being visible to provide a continuous visual indication of the amount of useful life remaining in the filter cartridge.

9. A filter cartridge end-of-life mechanism according to claim 1, wherein said end-of-life mechanism is incorporated into the filter cartridge.

10. A filter cartridge end-of-life mechanism for a gravity-fed water treatment device, comprising:

means for counting the number of times the water treatment device has been filled, including a member moved by the water; and

means, in cooperation with said fill-counting means, for providing a continuous visual indication of the amount of useful life remaining in the filter cartridge.

11. A filter cartridge end-of-life mechanism according to claim 10, wherein said member is a float.

12. A filter cartridge end-of-life mechanism according to claim 11, wherein said fill-counting means comprise an escapement mechanism wherein said float is advanced along an escapement path.

13. A filter cartridge end-of-life mechanism according to claim 12, wherein said continuous visual indicating means comprise an indicating member advanced by said float as said float is advanced along said escapement path.

14. A filter cartridge end-of-life mechanism according to claim 10, wherein said end-of-life mechanism is incorporated into the filter cartridge.

15. A filter cartridge assembly for a water treatment device, comprising:

a filter cartridge containing water treatment material and having an upper inlet end and a lower outlet end; and

a tray positioned beneath said outlet end, detachably connected to said filter cartridge and separable from the water treatment device, said tray being constructed and arranged such that treated water flowing from said outlet end flows generally toward said inlet end and out of said tray.

16. The filter cartridge assembly of claim 15, wherein said tray is shaped generally as a cup which extends substantially to said upper inlet end.

17. The filter cartridge assembly of claim 15, wherein the tray includes an outside wall extending downwardly to form a deflector plate and an inside wall extending upwardly past a bottom end of said inside wall, such that the treated water flows out of said tray through a gap between said inside and outside walls.

18. The filter cartridge assembly of claim 15, wherein said tray includes a notch extending upwardly from a bottom of said tray to reduce the surface tension of the treated water on an underside of said bottom.

19. The filter cartridge assembly of claim 15, wherein said tray is connected to said filter cartridge proximate an upper end of said tray.

20. The filter cartridge assembly of claim 15, wherein said filter cartridge assembly is constructed and arranged for use in and is incorporated in a gravity-fed water treatment device.